

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's Representative, Douglas Holtz on 17 April 2008.

The application has been amended as follows:

a. **Claim 24** has been amended as follows;

24. (Currently Amended) A geometric property analyzing system for analyzing geometric properties regarding at least one of a recording device, a recording medium, and an image pickup apparatus, the system comprising:

format storage means for storing a geometric property format;

recording means for recording a test chart including a plurality of marks on a recording face of a recording medium based on the geometric property format;

image pickup means for optically reading the test chart including the plurality of marks recorded on the recording face of the recording medium, ~~based~~ and creating a chart image; and

analyzing means for determining a reference point and two mutually independent reference vectors for determining the predetermined positions of the plurality of marks in the chart image such that the sum of squares of the difference becomes minimum between: respective positions of the plurality of marks in the chart image created by the image pickup means, and respective positions of the plurality of marks based upon the geometric property format stored in the format storage means.

- b. **Claim 57** has been amended as follows;

57. (New) A geometric property analyzing system for analyzing geometric properties regarding at least one of a recording device, a recording medium, and an image pickup apparatus, the system comprising:

format storage means for storing a geometric property format;

recording means for recording a test chart including a plurality of marks on a recording face of a recording medium based on the geometric property format;

image pickup means for optically reading the test chart including the plurality of marks recorded on the recording face of the recording medium, based and creating a chart image; and

analyzing means for calculating respective center positions of the plurality of marks in the chart image created by the image pickup means, and for determining at least one of a position vector of a reference point and a reference vector for determining the predetermined positions of the plurality of marks in the chart image such that the sum of squares of the difference becomes minimum between: respective center positions of the plurality of marks in the chart image created by the image pickup means, and respective positions of the plurality of marks based upon the geometric property format stored in the format storage means.

***Additional Prior Art of Record***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sugano et al. (US 5,481,378 A) teach an image forming apparatus with an image reproducing apparatus, an image reading means and sampling data and judging reproductions. Higginbottom et al. (US 6,952,484 B1) teach a method and system for mark detection including processing an image and a predetermined mark with predetermined characteristics.

***Claim Information***

3. **Claims 1-23, 25, & 30** are cancelled as indicated in Applicant's Amendments.

4. **Claim 55** was previously objected to, but the current amendment corrects the error and the objection is withdrawn.
5. **Claims 57-59** have been added as requested and submitted.

***Allowable Subject Matter***

6. **Claims 24, 26-29, & 31-56** are allowed as amended.
7. **Claims 57-59** are allowed as added.
8. The following is an examiner's statement of reasons for allowance:
  - a. The primary reason for allowance of independent **claims 24, 48, & 56** is the inclusion of the statement "for determining a reference point and two mutually independent reference vectors."
  - b. The primary reason for allowance of independent **claims 57, 58, & 59** is the inclusion of the statements "calculating respective center positions of the plurality of marks..." and "determining at least one of a position vector of a reference point and a reference vector."

Applicant's previously amended and newly added claims necessitated an additional search and while the citation of the newly found references related to the application are included, the existing and additional prior art of record fails to teach or fairly suggest a geometric property analyzing system which incorporates the method of analyzing geometric properties as detailed in the present application and was further exemplified by the above mentioned amendments and included statements.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Zimmermann whose telephone number is (571)270-3049. The examiner can normally be reached on Monday - Thursday, 7:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LUU MATTHEW/  
Supervisory Patent Examiner, Art Unit  
2861



